

**ARM Nauru Research Station
Site Visit 0306N Report**

Visit Duration: 12 June to 20 June

Denig District, Republic of Nauru
and
Menen Hotel, Denig District, Republic of Nauru

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A. Introduction

The main goals of the TWP Operations Site Visit 0307-N Visit (routine) to ARCS-1 at Nauru were the following: 1) Dismantle NIES Site 2) Document Site 3) H2 Generator Maintenance.

This report is organized according to the planned tasks or work units performed during the Site Visit. Within these work units the activities accomplished are arranged chronologically. Most of the information was put together by the Site Visit Team members based on the actual visit, daily reports.

B. TWP Operations Management and Site Visits

Site Visits are scheduled on approximately four-month intervals and are focused mainly on routine maintenance, instrument calibration, instrument replacement, and training. Sometimes non-routine visits are needed for technical tasks such as emergency repairs, retrofits, and/or the addition of new instruments. A formal audit-out is performed before departure.

The work on the Site Visit is performed by the Site Visit team, but often in close coordination with the local on-site Observers. The team holds a daily, morning tasking meeting at the site using the proposed Site Visit tasking schedule. After each day's work, the team meets to summarize work activities and an assigned team member writes a "Daily Report" and e-mails the report to TWP personnel in the U.S. Because of time-zone differences, necessary calls to instrument mentors in the U.S. are done in the morning.

Site Visit Members

- Troy Culgan
- David Reass - Reporter

C. Tasks Performed - Nauru

1. H2 Generator – Maintenance (Culgan)
13 Jun:
Maintenance of generator is progressing.
14 Jun:
Maintenance of generator has been completed.
15 Jun:
RBL maintenance is complete.
2. H2 Generator – Recon H-Van for Proton Generator swap out
14 Jun:
H-Van dimensions sent to Apple for further analysis of swap out.
3. Anemometer Labeling on Tower and Logger WIND1 and WIND2
18 Jun:
Labeling complete.
4. Review SMET/spare SMET logger for ORG problem
14 Jun:
Checked – ok is not a problem.
5. MWR Heater ID and marking
17 Jun:
MWR heater id complete. Troy sent confirmation sheet.
6. SDL v.2.1.2 upgrade (Reass w/ CD from Brad)
12 Jun:
Completed
7. Observer Shipping Training (Reass)
 - Locate shipping labels review w/ Observers16 Jun:
Shipping labels located and placed on first shipment with the assistance of the Observers.
 - Review shipping with DHL – always ship through Interconnex16 Jun:
Shipment of nine containers delivered to DHL and instructed to ship through Interconnex as per shipping sheet.
 - Review need to notify TWPO of shipments, HDs, etc. train on shipping sheets.16 Jun:
Observers knew exactly how to use the shipping spreadsheets however they have been instructed to e-mail shipping forms in addition to faxing them.
17 Jun:

Download new shipping forms for Observers from TWPO web site and placed on Observer laptop. Showed Observers how to correctly fill out shipping forms, save to folder and attach in an e-mail.

8. Inventory Tools for Needed Replacements (Culgan and Reass)

16 Jun:

Site tool inventory completed and detailed report sent.

9. Train Observers – Lockout/Tagout procedures, stickers (Reass)

14 Jun:

Went over lockout/Tagout procedures with Observers. Will order proper safety stickers for breaker boxes in Darwin to place on breakers during future visit.

10. Coordinate Truck Steam Clean, Undercoating with Duburiya (Reass)

19 Jun:

According to Nick this will not be able to be completed at this time due to a shortage of water on the island resulting in the ceased operation of steam cleaning.

11. Mark Up Drawing Book (Reass)

19 Jun:

Made changes to ARCS site drawing book

12. Photograph Site (Reass)

13 Jun:

Photographed all field instruments

14 Jun:

Photographing of all instruments located in ARCS vans.

13. Cash to Kaireua (Reass)

14 Jun:

Cash delivered to Andrew

14. Review Land Line Progress with Duburiya

15 Jun:

Review of landline work in progress.

16 Jun:

Troy reviewed landline progress with Nick and sent detailed report to Jones.

D. Tasks Completed – NIES

1. Dismantle Site Instruments

12 Jun:

Reviewed site prior to dismantling

13 Jun:

Removed all instruments and associated cabling.

2. Instruments (expect MET) – Pack and Send to SGP via Interconnex

13 Jun:

All instruments placed in NIES site room for packaging.

14 Jun:

Have started packing instruments in proper shipping containers.

15 Jun:

Instruments moved in packing containers from NIES hotel room to ARCS site in order to begin shipping paperwork.

16 Jun:

First shipment of nine containers delivered to DHL with associated paperwork. Will send shipping form when AWB# is received. Second shipment to follow tomorrow.

17 Jun:

Second shipment of NIES equipment packed and delivered to DHL. Shipping form to follow when AWB# is received.

3. Main Instrument Stand – Move to ARCS-2 Cal Stand.

20 Jun:

Observers have been instructed to move the stand and set up at ARCS site before the upcoming Calibration trip.

4. TSI Stand – Move to ARCS-2 (Out of the Way)

16 Jun:

TSI stand and stairs moved to ARCS-2 site and placed out of the way.

5. MET Stand and Instruments – Move to ARCS-2 (Out of the Way)

15 Jun:

Will ship all MET instruments to Darwin for minor refurbishment and calibration.

18 Jun:

MET instruments packed and delivered to DHL for shipment to Darwin. Shipping form to follow when AWB# is received.

20 Jun:

Observers have been instructed to move the MET stand and place out the way at the ARCS site.

6. Generator – Pack and Ship to Darwin with Cover

16 Jun:

GENSET removed from NIES site and delivered to ARCS-2. Troy spoke with GENSET Repair Company in Darwin and was given an estimated repair cost between \$2000-\$2500 AUD. Based on this information, is this unit still worth shipping?

17 Jun:

GENSET prepped for shipment (fuel and battery removed). Observers have been instructed to send the GENSET to Darwin on the next ship.

18 Jun:

GENSET spares packed and delivered to DHL for shipment to Darwin. Shipping to follow when AWB# is received.

7. Menen Room – Keep for TWP for Now.

16 Jun:

Andrew informed that we would like to keep the hotel room for immediate future.

8. Fencing – Leave in Place?

12 Jun:

May need to remove portions of fence in order to remove stands.

19 Jun:

Monty has requested that fence remain in place for the time being. When the fencing is ready to be removed Andrew has a team that can cut the posts with torches and remove the fencing.

E. Other

14 Jun:

- The captain La Perouse vessel left Nauru yesterday for Brisbane.
- Troy changed configurations for MET counsel at the request of the Darwin regional forecasting center in order to ensure data gets ingested properly.
- After review the status of the NIES site MET instruments, it would be best to ship them to Darwin for basic refurbishment, cabling checks and calibration. Please advise.

17 Jun:

- AERI mirror cleaned as per procedure with distilled water.
- Roofing materials delivered for cover of the car park.

18 Jun:

- Roofing replacement for car park began this afternoon.
- Delivered two boxes to DHL for shipment to Darwin.

19 Jun:

- Unfortunately we were unable to track down the Capelle manager to have the A/C swapped out. Apparently the manager was heading back from Brisbane today so we may be able to speak to him tomorrow about the work that needs to be performed. The A/C tech should have no problem installing the split type unit and it should not be a big deal as Troy spoke with him several days ago.

20 Jun:

- Final site report as we are leaving for Brisbane today. Roofing is now complete for the carport.
- AWB#'s received for outgoing shipments.
- Advised Nick on how to proceed with scheduling for A/C service on AERI Van.

F. Supplies/equipment needed for future

- Split type AC units
- 2 stage thermostat for AERI Van – check with Guy Wilcox

G. Equipment to be Shipped Back to Darwin

- NIES site MET Instruments, air shipment
- Kubota GENSET for repair, sea shipment
- Kubota GENSET spares, air shipment